



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,939	08/09/2001	Hitoshi Shoji	9319S-000257	4928

27572 7590 04/23/2003

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT	PAPER NUMBER
----------	--------------

2871

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,939

Applicant(s)

SHOJI, HITOSHI

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art (AAPA) in view of Endo et al., (Endo), USPAT 6,507,384
6. The AAPA described in the present application and shown in Figs. 15 and 16, discloses an electrooptical unit comprising:
 - an electrooptical panel (100) overlapping a circuit board (7) with a

predetermined space therebetween, the electrooptical panel including panel-side terminal facing circuit board-side terminals of the circuit board (Fig. 16); and

- a conductive material (60) connecting the terminal (481) of the liquid crystal panel (400) and the terminal (781) of the circuit board (7).

The AAPA described in the present application shows in Figs. 15 and 16 that the electronic components include a connector (60) elastically connected between the I/O terminals of the circuit board (7) and the I/O terminals (481) of the electrooptical panel.

The AAPA described in the present application also shows in Fig. 16 an external element such as a surface mount type capacitor (91).

The AAPA described in the present application further shows in Figs. 15 and 16, that a plurality of electrode patterns extends from an area where the driver IC (490) is located to an image area of the electrooptical panel.

The AAPA described in the present application discloses that the panel-side terminals are formed of an ITO film.

The AAPA described in the present application also discloses that the electrooptical panel is a liquid crystal panel and that the conductive material is an anisotropic conductive material.

The AAPA differs from the claimed invention because it does not explicitly disclose the flexible board that overlaps part of the electrooptical panel and includes a plurality of front-side terminals that are electrically connected with electrical components and rear side terminals that are electrically connected with the panel-side terminals via conductive member.

Endo discloses an electrooptical unit (20) that includes an electrooptical panel (21), a circuit board (23) and a flexible board (22) that includes front and rear side terminals (5B, 5A) wherein the rear side terminals are electrically connected with the terminals of the circuit board (Fig. 1). Endo also discloses that such an arrangement is advantageous since it simplifies a terminal connection process and enlarge an occupancy area of a display area (col. 3, lines 26-28).

Endo is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a flexible board that includes a plurality of front-side terminals, rear-side terminals and through holes wherein the rear side terminals are connected with the panel-side terminals and the front-side terminals are connected with electronic components.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the electrooptical unit of the AAPA by employing a flexible board that includes front and rear terminals and are connected with the electronic component and panel-side terminals respectively so that terminal connection process is simplified and an occupancy area of the display area is enlarges, as per the teachings of Endo.

Accordingly, claims 1-3, 5-11 and 15-19 would have been obvious.

As to claims 4 and 20, Endo shows in Fig. 1 that an area of the flexible board extends past an edge of the electrooptical panel (21).

As to claims 12 and 13, Endo shows in Fig. 1 that the first front-side terminals overlaps at least one of the panel-side terminals and are formed at a wider pitch than a pitch of the panel-side terminals.

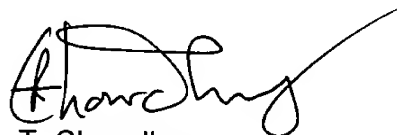
Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



T. Chowdhury
Patent Examiner
Technology Center 2800